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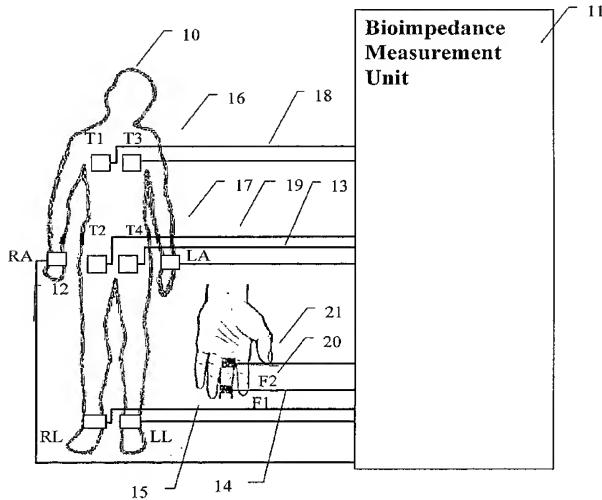
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(54) Title: NONINVASIVE MULTI-CHANNEL MONITORING OF HEMODYNAMIC PARAMETERS



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(57) Abstract: A method and system for measuring the electrical impedance of sections of a living body. The measurement is carried out utilizing a plurality of electrodes (12-21,24), each of which is disposed on a section of the living body, where the electrodes are capable of applying an electrical current through at least one probed section, and measure the electrical voltage over the probed section. The voltages over the probed sections are measured and the impedances ($Z(t)$) and their changes ($\Delta Z(t)$), and the resistances ($R(t)$) and their changes ($\Delta R(t)$) are calculated by considering the electrical current distortion components resulting from the electrical currents flowing in the other sections which are not probed, utilizing an electrical model at measurement unit (11) based on the distribution of the electrical currents through the body sections.